

REMARKS

Claims 1 through 20, 22-24, 26 and 27 are still pending in this application.

In the following, the Examiner's comments are included in bold, indented type, followed by the Applicant's remarks:

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/5/03 has been entered.

The communication filed on 12/05/03 cancelled Claims 21 and 25 and amended Claims 1, 3, 4, 7-14, 20, 22-24 and 26-27. Claims 1-20, 22-24 and 26-27.

Applicant agrees.

2. Applicant's arguments with respect to Claims 1-20, 22-24 and 26-27 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 7 recites the limitation "concatenated order number" in line 12, the analysis limitation. There is insufficient antecedent basis for this limitation in the claim. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has recited N specified items but does not explicitly define N. This renders the claim indefinite.

Applicant has amended claim 7 to clarify this limitation. Applicant submits that the limitations of claim 7 now have sufficient antecedent basis and respectfully requests that the Examiner reconsider the rejection of claim 7 and that the rejection be withdrawn.

Applicant respectfully disagrees that claim 13 is indefinite because of Applicant's use of "N specified item identifiers" and "an N items support table." First, the specification (*e.g.*, paragraph 47) includes the use of N. Second, N is no less definite than "a specified number of," "a number of," "a fixed number of," or some other formulation. Furthermore, because N is shorter than any of those formulations, it adds clarity to the claim.

Second, Applicant notes that the Examiner has allowed the use of N in a claim of another application. Applicant respectfully notes that the Examiner allowed claim 46 of U.S. Patent No. 6,738,759 B1 to Wheeler et al. ("Wheeler") which includes the limitation "using the relation bands, for 1 to N parent nodes, identifying the data items scores for their child nodes of the 1 to N parent nodes;" and the limitation "selecting a current parent node from the 1 to N parent nodes." The Applicant is not able to discern any difference in Wheeler's usage of N and the use of N in the present application.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 13 and that the rejection be withdrawn.

#### Claim Rejections - 35 USC § 102

**The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:**

**A person shall be entitled to a patent unless -**

**(e) the invention was described in (1) an application for patent published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language**

**4. Claims 1-4, 6, 14-20 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6430539 issued to Lazarus et al (filed 5/6/99), herein referred to as Lazarus.**

**Referring to Claims 1 and 20:**

**Lazarus discloses a method for use in analyzing associations in the sequence of transactions, the method comprising:**

**loading data from the transactions into a database system, where the data includes an entry for each transaction (col. 10, lines 40-50) and the transactions are grouped into sessions (col 3, lines 25-35);**

**ordering the transactions in sequence within each session (col 3, lines 28-33); and**

**performing an analysis of the sessions of transactions to find associations in the sequence of the transactions in the sessions (col 4, lines 45-50; col 5, lines 15-25, 50-55).**

Applicant respectfully disagrees and submits that Lazarus does not disclose or teach each of the limitations of claims 1 and 20.

First, Lazarus does not disclose or teach "loading data from the transactions into a database system, where . . . the transactions are grouped into sessions." The cited portion of Lazarus discusses "identifying co-occurrences of purchases within defined co-occurrence windows, which may be based on either a number of transactions, a time interval, or other sequence related criteria." Lazarus uses the co-occurrence windows to "count[] the number of times that two items . . . co-occur within [the] fixed size co-occurrence window in some set of data, here the transactions of the consumers." (col. 19, lines 3-6)

This is in contrast with "loading data from the transactions into a database system, where . . . the transactions are grouped into sessions," as required by claims 1 and 20.

Second, Lazarus does not disclose or teach "performing an analysis of the sequence of transaction to find associations in the sequence of the transaction in the session." The cited portions of Lazarus discuss:

- (1) defining "a membership function[,] . . . which describes how strongly the consumer is associated with each market segment" (col 4, lines 46-48);
- (2) determining "[s]egment transitions . . . [that] enable a financial institution to target consumers with promotions for merchants in the segments in which the consumers show significant increases in membership values" (col 5, lines 14-17);
- (3) "learning the relationships between merchants in transaction data, and defining vectors which represent the merchants" (col 5, lines 18-21); and
- (4) "identif[ying] and captur[ing] the patterns of spending behavior which result in the co-occurrence of the transaction at different merchant" (col 5, lines 21-25). The fifth portion of Lazarus cited by the examiner says that "[t]he relationship strength measure has the features that two merchants that co-occur significantly more often than expected are positively related to one another; two merchants that co-occur significantly less often than expected are negatively related to one another, and two merchants that co-occur about the number of times expected are not related." (col 5, lines 50-55).

The cited portions of Lazarus discuss the co-occurrence of transactions. Lazarus goes on to say that "[c]o-occurrence counting is the procedure of counting the number of times that two items, here merchant descriptions, co-occur within a fixed size co-occurrence window in some set of data, here the transactions of the consumers. Counting can be done forwards, backwards, or bi-directionally." (col. 19, lines 3-7)

This is in contrast to "performing an analysis of sessions of transaction to find associations in the order of the transactions in the sessions," as required by claims 1 and 20. As indicated in the specification, such analysis is useful, for example, where "a web page owner [is] interested to know that a customer that clicks on a first image on the web page followed by a second image may be more likely to make a purchase than a customer that clicks on the second image before the first image." (paragraph 5)

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claims 1 and 20 and that the rejection be withdrawn.

**Referring to Claim 2:**

**Lazarus discloses the limitations of Claim 1 above. Lazarus further discloses wherein the data for each transaction includes a time stamp related to a time that the transaction occurred (col 14, lines 30-35; Table 3) and wherein ordering the transactions comprises numbering the transactions based on the time stamps included in the data for the transactions (col 3, lines 20-**

Applicant respectfully disagrees and submits that claim 2 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus. Although Applicant has not provided detailed arguments with respect to claim 2, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 2 and that the rejection be withdrawn.

**Referring to Claim 3:**

**Lazarus discloses the limitations of Claim 2 above. Lazarus further discloses wherein numbering the transactions comprises numbering the transactions in sequence from the transaction having the earliest time stamp to the transaction having the latest time stamp (col 3, lines 30-40).**

Applicant respectfully disagrees and submits that claim 3 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus. Although Applicant has not provided detailed arguments with respect to claim 3, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 3 and that the rejection be withdrawn.

**Referring to Claim 4:**

**Lazarus discloses the limitations of Claim 1 above. Lazarus further discloses wherein loading the data from the transactions into the database system comprises parsing the data for each transaction into fields in the database system (col 15, lines 20-50); and identifying one of the fields as a session identifier field where a session identifier for each transaction is stored (col 14, lines 59-60, Account id, pop\_id, Table 4).**

Applicant respectfully disagrees and submits that claim 4 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus. Although Applicant has not provided detailed arguments with respect to claim 4, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 4 and that the rejection be withdrawn.

**Referring to Claim 6:**

**Lazarus discloses the limitations of Claim 1 above. Lazarus further discloses wherein performing the analysis comprises performing an affinity (relationship) analysis (col 4, lines 45-60; col 5, lines 15-25, 50-55).**

Applicant respectfully disagrees and submits that claim 6 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over

Lazarus. Although Applicant has not provided detailed arguments with respect to claim 6, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 6 and that the rejection be withdrawn.

**Referring to Claim 14:**

**Lazarus discloses a method for use in analyzing associations in the order of transactions, the method comprising loading data from the transactions into a database system, where the data includes an entry for each transaction (col 14, lines 25-35; Table 3) and wherein loading the data comprises grouping the transactions into groups (col 15, lines 55-60); selecting sessions of transactions belonging to the same group and corresponding to a single session (col 3, lines 25-40); ordering the transactions in sequence within each session (col 3, lines 25-40); and performing an analysis of the sessions of transactions to find associations in the sequence of the transactions in the sessions (col 5, lines 15-25, 50-55).**

Applicant respectfully disagrees and submits that claim 14 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus. Although Applicant has not provided detailed arguments with respect to claim 14, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 14 and that the rejection be withdrawn.

**Referring to Claim 15:**

**Lazarus discloses the limitations of Claim 14 above. Lazarus further discloses wherein each entry includes a time stamp related to a time that the transaction occurred and selecting comprises selecting entries with time stamps lying in a predetermined range (col 3, lines 25-50).**

Applicant respectfully disagrees and submits that claim 15 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over

Lazarus. Although Applicant has not provided detailed arguments with respect to claim 15, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 15 and that the rejection be withdrawn.

**Referring to Claim 16:**

**Lazarus discloses the limitations of Claim 15 above. Lazarus further discloses wherein ordering comprises numbering the selected entries based on their respective time stamps (col 3, lines 20-40).**

Applicant respectfully disagrees and submits that claim 16 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus. Although Applicant has not provided detailed arguments with respect to claim 16, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 16 and that the rejection be withdrawn.

**Referring to Claim 17:**

**Lazarus discloses the limitations of Claim 15 above. Lazarus further discloses wherein numbering comprises numbering the selected entries from the earliest to the latest (col 3, lines 3040).**

Applicant respectfully disagrees and submits that claim 17 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus. Although Applicant has not provided detailed arguments with respect to claim 17, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 17 and that the rejection be withdrawn.

**Referring to Claim 18:**

**Lazarus discloses the limitations of Claim 16 above. Lazarus further discloses wherein numbering comprises numbering the selected entries from the latest to the earliest (col 3, lines: 30-40).**

Applicant respectfully disagrees and submits that claim 18 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus. Although Applicant has not provided detailed arguments with respect to claim 18, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 18 and that the rejection be withdrawn.

**Referring to Claim 19:**

**Lazarus discloses the limitations of Claim 16 above. Lazarus further discloses wherein numbering comprises numbering the selected entries based on their respective distance in time from a reference time (col 3, lines 25-50).**

Applicant respectfully disagrees and submits that claim 19 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus. Although Applicant has not provided detailed arguments with respect to claim 19, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 19 and that the rejection be withdrawn.

**Referring to Claim 22:**

**Lazarus discloses the limitations of Claim 1 above. Lazarus further discloses where each entry includes a time stamp related to a time that the transaction occurred (col 14, lines 25-35, Table 3) and where, in selecting sessions, the computer selects entries with time stamps lying in a predetermined range (col 3, lines 2545).**

Applicant respectfully disagrees and submits that claim 22 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus. Although Applicant has not provided detailed arguments with respect to claim 22, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 22 and that the rejection be withdrawn.

**The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:**

**(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made**

**5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6430539 issued to Lazarus et al (filed 5/6/99), herein referred to as Lazarus further in view of US 5974396 issued to Anderson et al (filed 7/19/96), herein referred to as Anderson.**

**Referring to Claim 5:**

**Lazarus discloses the limitations of Claim 4 above.**

**Lazarus does not explicitly disclose “wherein loading the data from the transactions into the database system further comprises identifying one of the fields as an item identifier field where an item identifier for each transaction is stored”.**

**Anderson discloses wherein loading the data from the transactions into the database system further comprises identifying one of the fields as an item identifier field where an item identifier for each transaction is stored (col 10, lines 10-30).**

**At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify Lazarus such that the master file database includes an item identifier for each transaction. One of ordinary skill in the art would have been motivated to do this because it would allow the system to query the database for a particular item/product cluster (col 10, lines 40-60).**

Applicant respectfully disagrees and submits that claim 5 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus and Anderson. Although Applicant has not provided detailed arguments with respect to claim 5, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 5 and that the rejection be withdrawn.

**6. Claim 24 and 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6430539 issued to Lazarus et al (filed 5/6/99), herein referred to as Lazarus further in view of WO00/20998 by Miller et al, herein referred to as Miller (filed 10/1/99).**

**Referring to Claim 24:**

Lazarus discloses a database system for use in analyzing associations in the order of transactions, the database system comprising a parsing engine configured to parse transaction data and store the parsed transaction data in a table that is distributed across two or more data-storage facilities (col 10, lines 40-50); Fig 4), where the data includes an entry for each transaction and the transactions are grouped into sessions groups (col 3, lines 25-35; col 15, lines 55-60); a database-management component configured to operate on the table to order the transactions in sequence within each session (col 3, lines 28-33); and perform an analysis of the sessions of transactions to find associations in the sequence of the transactions in the sessions (col 4, lines 45-50; col 5, lines 15-25, 50-55).

Lazarus does not explicitly disclose “a massively parallel processing system comprising one or more nodes, a plurality of CPUs, each of the one or more nodes providing access to one or more CPUs; a plurality of virtual processes each of the one or more CPUs providing access to one or more virtual processes; each virtual process configured to manage data stored in one of a plurality of data-storage facilities”.

Miller discloses a massively parallel processing system comprising one or more nodes (page 6, lines 5-15); a plurality of CPUs, each of the one or more nodes providing access to one or more CPUs (page 6, lines 10- 15);

a plurality of virtual processes each of the one or more CPUs providing access to one or more virtual processes (page 6, lines 15-25); each virtual process configured to manage data stored in one of a plurality of data-storage facilities (page 6, lines 10-25).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify Lazarus such that the system operated in a parallel processing environment. One of ordinary skill in the art would have been motivated to do this because it would provide a mechanism that could significantly improve performance, efficiency and scalability of mining associations (Miller: page 9, lines 1-5).

Applicant respectfully disagrees and submits that claim 24 depends from claim 20 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus and Miller. Although Applicant has not provided detailed arguments with respect to claim 4, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 24 and that the rejection be withdrawn.

**Referring to Claim 26:**

Lazarus in view of Miller disclose the limitations of Claim 24 above. Lazarus further discloses where each entry includes a time stamp related to a time that the transaction occurred (col 14, lines 25-35, Table 3) and where, in selecting sessions, the computer selects entries with time stamps lying in a predetermined range (col 3, lines 25-45).

7. Claims 7-13, 23, 27 rejected under 35 U.S.C. 103(a) as being obvious over US 6430539 issued to Lazarus et al (filed 5/6/99), herein referred to as Lazarus in view of US 6611829 issued to Tate et al, herein referred to as Tate further in view of US 5806074 issued to Souder et al, herein referred to as Souder.

The applied reference (Tate) has a common assignee and inventor with the instant application. Based upon the earlier effective U.S. filing-date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or

**declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the primary inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).**

Applicant respectfully disagrees and submits that claim 26 depends from claim 20 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus, Tate, and Sounder. Although Applicant has not provided detailed arguments with respect to claim 26, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 26 and that the rejection be withdrawn.

**Referring to Claim 7, 23 and 27:**

**Lazarus discloses the limitations of Claim 1 above. Lazarus further discloses parsing the transaction data into fields in a base table in the database system (col 13, lines 5-10; Table 3; col 15, lines 50-55); identifying one of the fields as a session identifier field where a session identifier for each transaction is stored (Table 3, col 14, lines 25-30; Account id, pop\_id);**

**Lazarus does not explicitly disclose “identifying one of the fields as an item identifier field where an item identifier for each transaction is stored; ordering the transactions in each session of transactions in sequence comprises concatenating a sequence number to the item identifier for each transaction; performing the analysis comprises building one or more support tables for one or more item identifiers with concatenated order number; and calculating support, confidence and lift by joining the support tables.**

**Tate discloses loading data from the transactions into the database system comprises identifying one of the fields as an item identifier field where an item identifier for each transaction is stored (col 9, lines 10- 15); performing the analysis comprises building one or more support tables for one or more item identifiers with concatenated order number, and calculating support, confidence and lift by joining the support tables (col 13, lines 15-23).**

Lazarus in view of Tate does not explicitly disclose “ordering the transactions in each session of transactions in sequence comprises concatenating a sequence number to the item identifier for each transaction”.

Souder discloses ordering the transactions in each session of transactions in sequence comprises concatenating a sequence number to the item identifier for each transaction (col 12, lines 35-45).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the teachings of Lazarus such that an item identifier is stored and used to calculate support confidence and lift. One of ordinary skill in the art would have been motivated to do this because it would provide a data mining application that discovers relationships between items (Tate: col 3, lines 1-10).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the teachings of Lazarus in view of Tate such that ordering the transactions in sequence comprises concatenating a sequence number to the item identifier for each transaction. One of ordinary skill in the art would have been motivated to do this because it would ensure that duplicate transaction occurring at different points in time are accounted for. Furthermore, it would allow for each transaction to have a unique identifier (Souder col 12, lines 35-44).

Applicant respectfully disagrees and submits that claim 7 depends from claim 1 and claims 23 and 27 depend from claims 20 and for at least the reasons discussed above with regard to the independent claims, claims 7, 23, and 27 are patentable over Lazarus, Tate, and Souder. Although Applicant has not provided detailed arguments with respect to claims 7, 23, and 27, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claims 7, 23, and 27 and that the rejection be withdrawn.

**Referring to Claim 8:**

Lazarus and Tate in view of Souder disclose the limitation of Claim 7 above. Tate further discloses wherein building the one or more support tables comprises counting the transactions containing various combinations of item identifiers with concatenated sequence number and dividing the count by a total number of sessions to obtain a support for each of the combinations (col 9, lines 40-50).

Applicant respectfully disagrees and submits that claim 8 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus, Tate, and Souder. Although Applicant has not provided detailed arguments with respect to claim 8, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 8 and that the rejection be withdrawn.

**Referring to Claim 9:**

**Lazarus and Tate in view of Souder disclose the limitation of Claim 7 above. Tate further discloses wherein building the one or more support tables comprises for each item identifier with concatenated sequence number, counting the transactions containing the same item identifier with concatenated sequence number and computing the support by dividing the count by a total number of sessions groups and storing the item identifier with concatenated sequence order number and the support in a first support table (col 9, lines 45-60).**

Applicant respectfully disagrees and submits that claim 9 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus, Tate, and Souder. Although Applicant has not provided detailed arguments with respect to claim 9, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 9 and that the rejection be withdrawn.

**Referring to Claim 10:**

**Lazarus and Tate in view of Souder disclose the limitation of Claim 9 above. Tate further discloses wherein building the one or more support tables further comprises building a second base table by selecting transactions from the first base table that include an item identifier corresponding to an item identifier and concatenated sequence order number having a support more than a predetermined value (col 9, lines 50-60).**

Applicant respectfully disagrees and submits that claim 10 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus, Tate, and Sounder. Although Applicant has not provided detailed arguments with respect to claim 10, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 10 and that the rejection be withdrawn.

**Referring to Claim 11:**

**Lazarus and Tate in view of Souder disclose the limitation of Claim 10 above. Tate further discloses wherein building the one or more support tables further comprises counting the transactions in the second base table containing various combinations of item identifiers with concatenated sequence number and dividing the count by a total number of sessions in the second base table to obtain a support for each of the combinations (col 9, lines 50-60).**

Applicant respectfully disagrees and submits that claim 11 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus, Tate, and Sounder. Although Applicant has not provided detailed arguments with respect to claim 11, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 11 and that the rejection be withdrawn.

**Referring to Claim 12:**

**Lazarus and Tate in view of Souder disclose the limitation of Claim 10 above. Tate further discloses wherein building the one or more support tables further comprises counting the transactions in the second base table containing combinations of two specified item identifiers with concatenated sequence number and dividing the count by a total number of transactions in the second base table to obtain a support for each of the combinations; and storing the item identifiers and computed support in a two item support table (col 9, lines 50-60).**

Applicant respectfully disagrees and submits that claim 12 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus, Tate, and Sounder. Although Applicant has not provided detailed arguments with respect to claim 12, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 12 and that the rejection be withdrawn.

**Referring to Claim 13:**

**Lazarus and Tate in view of Souder disclose the limitation of Claim 10 above. Tate further discloses wherein building the one or more support tables further comprises counting the transactions in the second base table containing combinations of N specified item identifiers with concatenated sequence number and dividing the count by a total number of transactions in the second base table to obtain a support for each of the combinations; and storing the item identifiers and computed support in an N item support table (col 9, lines 50-60).**

Applicant respectfully disagrees and submits that claim 13 depends from claim 1 and for at least the reasons discussed above with regard to the independent claim is patentable over Lazarus, Tate, and Sounder. Although Applicant has not provided detailed arguments with respect to claim 13, Applicant remains ready to do so if it becomes appropriate.

For these reasons, Applicant respectfully requests that the Examiner reconsider the rejection of claim 13 and that the rejection be withdrawn.

**SUMMARY**

Applicant contends that the claims are in condition for allowance, which action is requested. Applicant does not believe any fees are necessary with the submitting of this response. Should any fees be required, Applicant requests that the fees be debited from deposit account number 50-1673.

Respectfully submitted,



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